



#4  
Pre-A.  
CERA-234 (10110472)  
Hawkins  
5/31/02

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Bindig, et al.

Serial No. : 10/016,488

Filing Date : November 1, 2001

For : EXTERNAL ELECTRODES FOR MULTILAYER ACTUATORS

February 14, 2002

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231  
Box Missing Parts

I hereby certify that this correspondence is being deposited with the  
United States Postal Service by Express Mail No. EL 829643286  
addressed to Commissioner of Patents and Trademarks, Washington,  
D.C. 20231 on February 14, 2002

Eileen Sheffield

*Eileen Sheffield 2/14/02*

Signature

Date

### PRELIMINARY AMENDMENT

Sir:

In advance of prosecution, please amend the above-identified patent application as follows:

✓ IN THE CLAIMS

✓ Cancel all claims in the case without prejudice and substitute the following claims:

*a/*  
*CMT.*

27. External electrodes on piezoceramic multilayer actuators, composed of a layer of basic metallization applied to the ceramic material of the surface of a actuator, to which metallization there is joined by means of a joining layer, a reinforcing layer to which a connecting wire is soldered, wherein the layer of basic metallization is structured by discontinuities or recesses.

28. External electrodes according to Claim 27, wherein the structure of the basic metallization is composed of a printed pattern of a suitable termination paste, which printed pattern has been produced by means of a printing method.

29. External electrodes according to Claim 27, wherein the structure of the basic metallization is formed by a mechanical, chemical or electrochemical removal in a layer of the basic metallization applied over the entire area.